



# Interprofessional cooperation by midwives in the field of out-of-hospital obstetrical care: an integrative review

## Interprofessionelle Kooperation von Hebammen im Handlungsfeld der ambulanten geburtshilflichen Versorgung: ein integratives Review

Martina Schlüter-Cruse<sup>1,2</sup>, Wilfried Schnepf<sup>2,1</sup>,  
Friederike zu Sayn-Wittgenstein<sup>1,2</sup>

<sup>1</sup>Osnabrück University of Applied Sciences, Faculty of  
Business Management and Social Sciences, Barbarastr. 24,  
49076 Osnabrück, GERMANY

<sup>2</sup>Witten/Herdecke University, Faculty of Health, Department  
of Nursing Science, Stockumer Straße 12, 58453 Witten,  
GERMANY

Received 28 March 2016, accepted 20 August 2016, available online 10 November 2016

### Abstract

The central objective of early prevention in Germany is an improved cooperation between professional groups of the health services and child and youth welfare in interprofessional networks. This objective derives from the realisation that proper care for families with infants can only be achieved if the various groups act in close integration. The 'Federal Initiative early prevention' explicitly calls for freelance midwives to be integrated in this context. However, only a few scientific findings on midwives' cooperation in networks of early prevention have been published to date. This integrative review aims to identify the central themes of interprofessional cooperation of midwives in out-of-hospital obstetrical care from national and international research literature.

A systematic search of five research databases for publications between 2005 and 2015 was performed, complemented by a manual search.

25 studies were identified describing various contexts where midwives in out-of-hospital obstetrical care cooperate with other professional groups. Four key themes were analysed: contexts of cooperation, benefits of cooperation, facilitating and restrictive factors of cooperation, and competencies of cooperation. The studies show that there is only limited research coverage of the midwives' perspective regarding interprofessional cooperation. The existing studies examine the cooperation of midwives primarily with health care professionals, and secondarily with professionals in the social services.

In order to expand knowledge on the cooperation of freelance midwives in the networks of early prevention, future research should focus on the perspective of midwives regarding cooperation with other professional groups, both in the health care sector and in the field of social services.

### Abstract

Ein zentrales Ziel der "Frühen Hilfen" in Deutschland ist die Kooperation zwischen den Berufsgruppen des Gesundheitswesens und der Kinder- und Jugendhilfe in interprofessionellen Netzwerken. Diese Zielsetzung basiert auf der Erkenntnis, dass eine ausreichende Versorgung von Familien mit Säuglingen und Kleinkindern nur durch eine enge Vernetzung unterschiedlicher Sektoren erlangt werden kann. Freiberufliche Hebammen sind im Rahmen der „Bundesinitiative Frühe Hilfen“ als einzubindende Akteurinnen aus dem Gesundheitswesen aufgeführt. Wissenschaftliche Erkenntnisse zu ihrer Kooperation in den Netzwerken "Frühen Hilfen" liegen bislang jedoch kaum vor.

Ziel dieses integrativen Reviews ist es aus der nationalen und internationalen Forschungsliteratur zentrale Themen zur interprofessionellen Kooperation von Hebammen der ambulanten Versorgung zu identifizieren.

Im Rahmen einer systematischen Recherche für den Zeitraum 2005 bis 2015 wurde in fünf Datenbanken recherchiert, sowie eine Handsuche durchgeführt.

Es wurden 25 Studien identifiziert, welche die vielfältigen Kontexte aufzeigen, in denen Hebammen der ambulanten Versorgung mit anderen Berufsgruppen kooperieren. Die Auseinandersetzung mit diesen führte zur Analyse von vier zentralen Themen: Kontexte von Kooperation, Gewinn durch Kooperation, fördernde und hemmende Faktoren von Kooperation sowie Kompetenzen zur Kooperation. Die Studien verdeutlichen das nur eingeschränkte vorhandene Forschungsbild zur Perspektive der Hebammen zur interprofessionellen Kooperation. Die Kooperation von Hebammen wird vor allem mit Berufsgruppen des Gesundheitswesens, seltener mit Berufsgruppen des Sozialwesens untersucht.

Um fundierte Erkenntnisse zur Kooperation freiberuflicher Hebammen in Netzwerken der "Frühen Hilfen" zu erlangen, sollten zukünftige Forschungsarbeiten die Sichtweise von Hebammen zur Kooperation mit anderen Berufsgruppen sowohl aus dem Gesundheits- als auch dem Sozialwesen genauer untersuchen.

### Keywords

interprofessional cooperation – midwife – out-of-hospital obstetrical care – review – early prevention

### Keywords

Interprofessionelle Kooperation – Hebamme – ambulante geburtshilfliche Versorgung – Übersichtsarbeit – "Frühe Hilfen"

## 1 INTRODUCTION

Currently in Germany the cross-system cooperation between professional groups in the health services and in child and youth welfare is being discussed as a central objective as well as a challenge in the context of establishing so called Early Prevention support services for parents and their children (Lohmann, 2015; Nationales Zentrum Frühe Hilfen NZFH, 2014a). Early prevention schemes are aimed at sustainably improving the development possibilities for children and parents (Nationales Zentrum Frühe Hilfen, 2014b). In the early prevention networks, freelance midwives are seen as cooperation partners from the health services (NZFH, 2014a), but there are hardly any scientific findings that permit conclusions to be drawn about the cooperation of self-employed midwives in interdisciplinary networks (Ayerle, Mattern, & Fleischer, 2014). Care provided by a midwife during pregnancy, postnatal, and breastfeeding periods is a standard service under the German health system (§ 134a, SGB V). Midwifery has a special potential that lies in the continual, outreaching care (Sayn-Wittgenstein, 2007). The present paper is an integrative review in the sense of Whittemore and Knafl (2005) and is part of a research project investigating the cooperation of freelance midwives in early prevention networks. Its purpose is to locate findings in the research literature that focus on interprofessional cooperation from the perspective of midwives working in out-of-hospital obstetrical care. In this paper, out-of-hospital obstetrical care shall be defined as the continual, outreaching care by midwives for women and families.

Although up to now there is only little empirical evidence that cooperation between professional groups leads to an improved care service (Cameron & Lart, 2003; Dowling, Powell, & Glendinning, 2004), the increasingly complex tasks in the health service system require greater cooperation between the professional groups (Kaba-Schönstein, 2004; Kuhlmei, 2011; Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen SVR, 2007). The expectations of women and the susceptibility of certain groups render it vital that midwives continue to develop their potentials for working together with other professional groups (Williams & Davis, 2014). Children with multiple and complex needs benefit particularly from cooperation between the professional groups (Hurlburt et al., 2004).

The concepts used in the national and international literature to describe cooperation are heterogeneous, and there is a broad debate about the different terminologies (Heatley & Kruske, 2011; Kälble, 2004; Schmied et al., 2010). In this study we will apply the expression 'interprofessional cooperation' based on the understanding that "[...] members of different professional groups with

different specialisations, professional self-perception and perception of others, areas of competence, fields of activity and different status in the sense of complementary, high quality, patient-orientated care should work directly together, so that the specific competences of each individual profession can be made useable for the patient" (Kälble, 2004, S. 40). The investigations included in the integrative review are based on this understanding, even though the terminology used is sometimes a different one.

## 2 RESEARCH QUESTIONS

The 'Federal Initiative early prevention' calls for freelance midwives to be integrated into the early prevention networks (Art. 2, Abs. 3 VV BIFH). Resulting from this, fundamental questions concerning cooperation as such and the midwives understanding of cooperation are raised by this general demand. The aim of this article is to identify the central themes of the interprofessional cooperation of midwives working in the field of out-of-hospital obstetrical care, drawing on empirical data from the national and international sources. The focus of the analysis is on the midwives' perspective. The analysis is based on the following research questions:

1. In which contexts do midwives in out-of-hospital obstetrical care cooperate with other professional groups?
2. What benefits do they see from cooperating with other professional groups?
3. Which factors facilitate or restrict the cooperation of midwives with other professional groups?
4. Which competences are required for an effective cooperation?

## 3 METHOD

The method for the current investigation is an integrative review, which is the broadest type of research review and was chosen in order to fully understand the phenomenon in question (Whittemore & Knafl, 2005). The following subsections will in turn give details of the procedures adopted for the literature search, the selection of the studies, and the evaluation of their quality.

### 3.1 Systematic literature search

Relevant literature was identified between April and August 2015 by conducting a systematic literature search through the electronic databases Pubmed, Cochrane Database, CINAHL, PsycInfo, and CareLit. Additional references were found by conducting a manual search in relevant professional journals and in publications by the German National Centre on early prevention. The



manual search consisted viewing the reference lists of the literature identified and the contents lists of relevant journals (Midwifery, IJHP). In addition, contact was made with research scientists on the social network ResearchGate, who had investigated the subject of cooperation of midwives and who were able to point out further publications.

The search was conducted with a documented list of keywords, taking MeSH - Terms (Medical Subject Headings) into account. The list consisted of the following keywords, either on their own or combined and included truncations as indicated: (midwife\* OR midwives) AND (interdisciplin\* OR multidisciplin\* OR multiprofessional\* OR interprofessional\* OR intersectoral\* OR cooperat\* OR collaborat\* OR network OR "early prevention"). CareLit was the only German database used and here the keywords were entered in German. The search was limited to the years 2005–2015; this relatively short period was selected because a previous search with a more extensive time frame showed that during the last 10 years, there had been a clear increase in the number of publications in all databases. This date restriction was used to ensure the relevance of the data found in this growing field of research. The search history followed the guidelines of the PRISMA statement (Moher, Liberati, Tetzlaff, & Altman, 2009) and is shown in Figure 1 as a flow chart.

The selection and critical appraisal of the studies was carried out by the lead author. Studies requiring discussion regarding their inclusion or exclusion were examined by researchers of nursing science, midwifery, and social science in a research workshop at Osnabrück University of Applied Sciences. The five experts made their selections individually and reached an agreement with the lead author. The experts were also consulted regarding the critical appraisal of the studies, if necessary. The inclusion and exclusion criteria, the critical appraisal, themes, and subthemes were discussed with both co-authors. A total of 4,778 publications were identified through the database search, a further 8 were added following the manual search. After the removal of duplicates, 3,928 studies were subjected to a screening of titles and abstracts.

### 3.2 Screening and selection of suitable studies

#### 3.2.1 Screening of titles and abstracts

In a first selection process, the titles and abstracts of the hits identified were checked with regard to their relevance to the research issues. The appraisal was conducted according to the predefined inclusion and exclusion criteria. Articles were only included if an abstract was available and if they had been peer-reviewed. The studies included were published in either English or German. In order to get a comprehensive overview of the literature published on the topic in question, qualitative and quantitative research reports, mixed-methods studies, and literature reviews were taken into consideration. To qualify for further scrutiny, studies needed to be carried out exclusively in the Western industrialised countries or in comparable societies, since it must be assumed that the health care system has an influence on the form of cooperation and that the challenges of cooperation are characterised by the respective social and healthcare systems. Publications included focus explicitly on the setting of cooperation in out-of-hospital obstetrical care or are transferrable to this context. A recent systematic review discovered that the interprofessional cooperation of midwives with other associated health professionals has as yet not been the subject of much research (Supper et al., 2015). Thus, the search was set up in a way to include studies investigating questions of cooperation across different disciplines, from which the specific perspective of midwives could be extracted. We excluded abstracts written for congress papers, comments on articles, editorials, book reviews, and policy documents. Furthermore, articles focussing on interdisciplinary learning, tertiary education, and further education, and thus directed at gaining interdisciplinary competences were excluded. Scientific papers that could be considered as irrelevant with regard to the issues concerned, such as studies on themes from other special

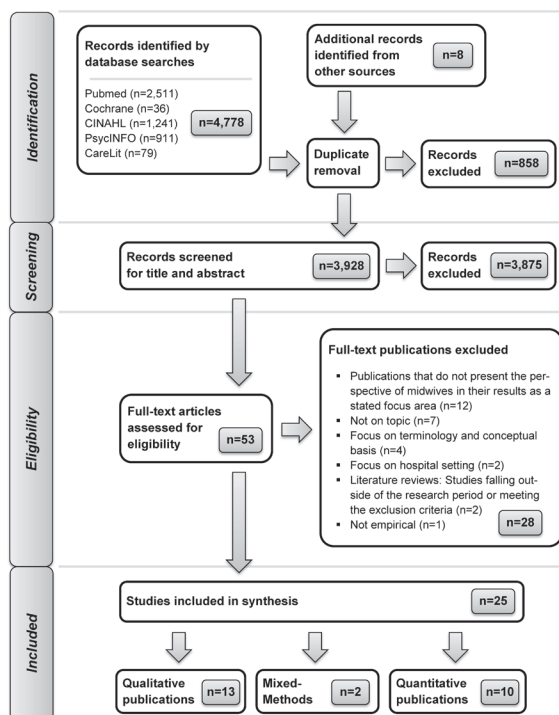



Figure 1: PRISMA flow chart illustrating the exclusion process



fields, were also omitted from our research. Publications where a screening of titles and abstracts did not provide definite information were included in the full-text analysis. Any potentially relevant papers, the full text of which was not available online, were ordered via inter-library loan. After examination of the titles and abstracts, a total of 53 studies remained, which were then checked for suitability through a full-text screening.

### 3.2.2 Full-text screening

Following the full-text screening, 28 studies were removed. Twelve studies had to be excluded because the midwives' perspective was not represented. This perspective was either not the topic under investigation or it was not focussed on in the results presented. In one discursive paper, studies with and without consideration of the midwives' perspective were included, which led to the exclusion of the article. However, one of the studies included met the inclusion criteria and had been incorporated in the results previously (Homer et al., 2009). Seven studies were found to have irrelevant topics and were, therefore, excluded. Four studies were concerned with conceptual delineations and had to be excluded. Two studies investigated cooperation in a hospital-based context, and their results could not be transferred to the out-of-hospital obstetrical care by midwives. Two potentially relevant reviews were excluded because, although they focussed on midwives, they were not performed within the research time frame or they referred to themes that complied with the exclusion criteria. A further publication was excluded because it was not based on empirical research. After completing this last screening, 25 of the 53 originally identified studies were included for further analysis. Table 1 shows an overview of the excluded studies.

### 3.3 Critical appraisal of studies

The quality of the 25 selected studies was reviewed by the lead author to estimate their relevance for the thematic analysis (Aveyard, 2014). The Critical Appraisal Skills Programme (2013) was used to check the qualitative studies. If all the screening criteria were fulfilled, a maximum score of 10 could be attained, and it was found that the majority of the studies scored 9 to 10 points. The critical appraisal of the quantitative studies (Caldwell, Henshaw, & Taylor, 2011) resulted in five publications fulfilling the criteria adequately and five with methodical limitations. In two of the latter studies, the total sample was very small (Ayerle et al., 2014; Nagel-Brotzler, Brönnner, Hornstein, & Albani, 2005). In another survey, the number of participating general practitioners was too low (Vedam et al., 2012). In a further study, the questionnaire used has not been validated (Ratti, Ross, Stephanson, & Williamson, 2014). Finally, in the study

of Smith et al. (2009), the description of the sample was insufficient. The critical appraisal of the mixed-methods studies (Aveyard, Sharp, & Wooliams, 2011) confirmed the high quality of the study by Psaila, Schmied, Fowler, & Kruske (2015) and revealed the shortcomings of Shaw's study (2013). These expose poorly described samples, incomplete details about the collection, and evaluation of the data as well as lacking the transferability of the results. Despite those weaknesses, the studies were included and did provide valuable input to this research.

Details of the evaluation are shown in Tables 2, 3, and 4.

## 4 RESULTS

Section 4.1 describes the included studies shown synoptically in Tables 2, 3, and 4.

The results of the thematic analysis follow subsequently (Aveyard, 2014). Four themes were analysed within the frame of the content-related discussion: cooperation contexts (section 4.2), benefits of cooperation (section 4.3), facilitating and restrictive factors of cooperation (section 4.4), and competences for an effective cooperation (section 4.5). To demonstrate the contribution of each paper towards the synthesis, a grid was compiled at the end of the result section (Table 5).

### 4.1 Description of the included studies

#### 4.1.1 Study design

The integrative review is based on a total of 25 studies, published between 2005 and 2015, of which 18 appeared in 2010 or later. Of the total of 25 studies, 5 each came from Australia, the United Kingdom, and Canada, 4 studies were from Sweden, 2 each from Germany and the Netherlands, 1 from Norway, and 1 from New Zealand. A comparison of the study designs shows that a qualitative research approach predominated in 13 studies, 10 studies employed a quantitative design, and 2 used a mixed-methods design.

#### 4.1.2 Populations of the included studies

Midwives participated exclusively in five of the studies (Ayerle et al., 2014; Fontein-Kuipers, Budé, Ausems, Vries, & Nieuwenhuijze, 2014; Murray-Davis, Marshall, & Gordon, 2011; Nagel-Brotzler et al., 2005; Skinner & Foureur, 2010), of which one had a qualitative design (Murray-Davis et al., 2011). The populations of all the other studies were of varying composition, consisting midwives, nurses, physicians, associated health professionals, addressees of the care system, professional groups from social services, representatives of administration and politics, as well as members of other professions. Midwives and nurses working mainly in the fields of child health care and child and family health care, either as public health nurses or as representatives



Table 1: Overview of studies excluded from analysis

First author and year <sup>1</sup>	Title	Reason for exclusion
Beldon (2005)	Health promotion in pregnancy: The role of the midwife	Not on topic
Borrow (2011)	Community-based child health nurses: An exploration of current practice	Publication that does not present the perspective of midwives in its results as a stated focus area
Caldwell (2006)	Preparing for practice: How well are practitioners prepared for teamwork	Publication that does not present the perspective of midwives in its results as a stated focus area
Colvin (2013)	A systematic review of qualitative evidence on barriers and facilitators to the implementation of task-shifting in midwifery services	Not on topic
Crotty (2012)	Helping and hindering: Perceptions of enablers and barriers to collaboration within a rural South Australian mental health network	Publication that does not present the perspective of midwives in its results as a stated focus area
D'Amour (2005)	The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks	Focus on terminology and conceptual basis
Downe (2010)	Creating a collaborative culture in maternity care	Focus on terminology and conceptual basis
Harris (2012)	Effect of a collaborative interdisciplinary maternity care program on perinatal outcomes	Publication that does not present the perspective of midwives in its results as a stated focus area
Heatley (2011)	Defining collaboration in Australian maternity care	Focus on terminology and conceptual basis
Lane (2006)	The plasticity of professional boundaries: A case study of collaborative care in maternity services	Focus on hospital setting
Larsson (2009)	Professional role and identity in a changing society: Three paradoxes in Swedish midwives' experiences	Focus on hospital setting
Lavender (2004)	An exploration of midwives' views of the current system of maternity care in England	Not on topic
Lipp (2008)	A woman centred service in termination of pregnancy: A grounded theory study	Not on topic
Manniën (2012)	Evaluation of primary care midwifery in the Netherlands: Design and rationale of a dynamic cohort study (DELIVER)	Publication that does not present the perspective of midwives in its results as a stated focus area
McIntyre (2012)	The struggle for contested boundaries in the move to collaborative care teams in Australian maternity care	Not empirical
McKenna (2009)	Health care managers' perspectives on new nursing and midwifery roles: Perceived impact on patient care and cost effectiveness	Not on topic
Martin (2010)	Developing interdisciplinary maternity services policy in Canada. Evaluation of a consensus workshop	Publication that does not present the perspective of midwives in its results as a stated focus area
Peterson (2013)	Most family physicians work routinely with nurse practitioners, physician assistants, or certified nurse midwives	Publication that does not present the perspective of midwives in its results as a stated focus area
Psaila, Schmied (2014)	Discontinuities between maternity and child and family health services: Health professional's perceptions	Not on topic
Schmied (2010)	The nature and impact of collaboration and integrated service delivery for pregnant women, children and families	Discursive paper that does not present the perspective of midwives in its results as a stated focus area, one study already included (Homer et al., 2009)
Sheehan (2007)	Comparison of language used and patterns of communication in interprofessional and multidisciplinary teams	Focus on terminology and conceptual basis
Smith (2015)	Midwife-physician collaboration: A conceptual framework for interprofessional collaborative practice	Publication that does not present the perspective of midwives in its results as a stated focus area
Stamp (2008)	Aboriginal maternal and infant care workers: Partners in caring for Aboriginal mothers and babies	Not on topic
Stevens (2012)	Description of a successful collaborative birth center practice among midwives and an obstetrician	Publication that does not present the perspective of midwives in its results as a stated focus area
Supper (2015)	Interprofessional collaboration in primary health care: A review of facilitators and barriers perceived by involved actors	Literature review including 44 articles: three studies focus on midwifery: one is out of research period, two met the exclusion criteria
Vedam (2014)	Transfer from planned home birth to hospital: Improving interprofessional collaboration	Publication that does not present the perspective of midwives in its results as a stated focus area
Zwarenstein (2009)	Interprofessional collaboration: Effects of practice-based interventions on professional practice and healthcare outcomes	Publication that does not present the perspective of midwives in its results as a stated focus area
Xyrichis (2008)	What fosters or prevents interprofessional teamworking in primary and community care? A literature review	Literature review including 10 articles: four studies focus on midwifery: three are out of research period, one met the exclusion criteria

<sup>1</sup> The complete references of studies excluded can be requested from the author.





Table 2: Details and critique of the qualitative papers included in the thematic analysis

Authors, year, country	Research aim	Sample	Methods	Quality score (CASP, 2013)
Barimani & Hylander (2008), Sweden	Exploring health care professionals' experience of cooperation in the chain of care between antenatal care, postpartum care and child health care	<u>n=32</u> 19 midwives 13 child health care nurses	Focus groups, individual interviews	9
Barimani & Hylander (2012), Sweden	Investigating strategies for continuity of care for expectant and new mothers	<u>n=41</u> 9 midwives 11 child health care nurses 21 mothers	Interviews, participant observation, document analysis	9
Edvardsson et al. (2011), Sweden	Exploring facilitators, barriers and requirements for programme sustainability two years after finalizing implementation of a multisectoral child health promotion programme	<u>n=23</u> 5 midwives 7 child health nurses 7 dental nurses 4 pre-school teachers	Face-to-face interviews	10
Homer et al. (2009), Australia	Describing current approaches to transitions of care from midwives to child and family health nurses; Understanding the barriers and facilitators to effective transition of care	<u>n=67</u> 19 midwifery managers 14 midwifery consultants, community midwives 12 child and family health nurse managers 13 child and family health nurse consultants 4 family coordinators 5 others	Questionnaire with a series of open-end questions	10
Miers & Pollard (2009), United Kingdom	Exploring non-medical health and social care professionals' views on the abilities they need to collaborate	<u>n=34</u> 13 nurses 4 midwives 5 physiotherapists 7 social workers 4 occupational therapists	Face-to-face and telephone interviews	5
Munro, Kornelsen, & Grzybowski (2013), Canada	Exploring barriers to and facilitators of interprofessional models of maternity care between physicians, nurses and midwives in rural British Columbia	<u>n=73</u> 7 midwives 27 physicians 18 nurses 5 community-based providers 5 birthing women 5 administrators 6 decision makers	In depth-interviews, focus group	10
Murray-Davis, Marshall, & Gordon (2011), United Kingdom	Understanding midwives' perceptions regarding interprofessional working and learning and its relevance to midwifery care	<u>n=39</u> 11 heads of midwifery 16 midwifery educators 12 newly qualified midwives	Interviews, focus groups	9
Peterson, Medves, Davies, & Graham (2007), Canada	Describing care providers' attitudes towards multidisciplinary maternity care and facilitators of and barriers to collaborative maternity care	<u>n=25 participants from national care provider associations:</u> 4 Association of Family Physicians 5 Association of Midwives 3 Nurses Association 4 Society of Obstetricians and Gynaecologists 4 Society of Rural Physicians 5 Association of Women's Health, Obstetric and Neonatal Nurses	Telephone interviews	8
Pollard (2011), United Kingdom	Exploring how midwives' discursive practices relate to the status quo and how they contribute either to maintaining or challenging traditional discourses	<u>n=32 (interviews)</u> 20 midwives 4 obstetricians 8 women <u>n=88 (observation)</u> 32 midwives 4 administrative staff 27 medical staff 5 students 10 auxiliaries 6 other hospital staff 4 women	Interviews, observation	9



*continued* Table 2: Details and critique of the qualitative papers included in the thematic analysis

Authors, year, country	Research aim	Sample	Methods	Quality score (CASP, 2013)
Psaila, Fowler, Kruske, & Schmied (2014), Australia	Describing innovations developed to improve transition of care between maternity and child and family health services at seven sites across four Australian states; Identifying the characteristics common to all innovations	<u>n=33</u> midwives, managers, child and family health nurses, GP's, support workers, allied health staff, Aboriginal health workers, community health professionals <i>number of each profession not stated</i>	Face-to-face and telephone interviews, focus groups	9
Schmied et al., (2015), Australia	Exploring professionals' perceptions of the challenges and opportunities in implementing a national approach to universal child and family health services across Australia	<u>n=161</u> 60 child and family health nurses 45 midwives 15 GP's 12 practice nurses 14 allied health professionals 7 childhood specialists 6 staff from non-government organisations 2 government advisors	Focus groups via telephone conference and face-to-face, discussion groups at national conferences, videoconference, teleconference, e-conversation, one-to-one interviews	10
Schölmerich et al. (2014), Netherlands	Exploring factors that make it challenging to achieve coordination in Dutch midwifery and obstetrics	<u>n=40</u> 13 community midwives 8 hospital-based-midwives 19 obstetricians	Semi-structured interviews, non-participatory observation	10
While, Murgatroyd, Ullman, & Forbes (2006), United Kingdom	Exploring nurses', midwives' and health visitors' experiences of cross-boundary working	<u>n=113</u> 16 midwives 66 nurses 14 health visitors 3 GP's 4 social workers 2 Sure Start workers 3 service users 5 others	World café focus group method	5

Table 3: Details and critique of the quantitative papers included in the thematic analysis

Authors, year, country	Research aim	Sample	Methods	Critique - Framework according to Caldwell, Henshaw, & Taylor (2011)
Ayerle, Mattern, & Fleischer (2014), Germany	Collecting data on free-lance midwives' knowledge and attitudes regarding early prevention in Saxony-Anhalt	42 community midwives	Online survey based on questionnaire	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample size not representative</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Clancy, Gressnes, & Svensson (2013), Norway	Examining collaboration issues relating to public health nursing in different-sized Norwegian municipalities	<u>n=1,596</u> 849 public health nurses 113 doctors 519 child protection workers 115 midwives	Cross-sectional online survey based on questionnaire	Meets criteria <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>



Continued **Table 3: Details and critique of the quantitative papers included in the thematic analysis**

Authors, year, country	Research aim	Sample	Methods	Critique - Framework according to Caldwell, Henshaw, & Taylor (2011)
Edvardsson et al. (2012), Sweden	Examining the outcomes of a child health promotion programme on professionals' self-reported health promotion practices and to investigate perceived facilitators and barriers for programme implementation	<b>Survey 1:</b> <u>Pre-implementation:</u> <u>n=134</u> 30 midwives 80 nurses 24 pre-school teachers <b>Post-implementation:</b> <u>n=109</u> 22 midwives 67 nurses 20 pre-school teachers <b>Survey 2:</b> <u>Occasion 1: n=142</u> midwives, nurses, pre-school teachers <u>Occasion 2: n=98</u> midwives, nurses, pre-school teachers <i>number of each profession not stated in survey 2</i>	Two surveys based on questionnaire  <b>Survey 1:</b> Online survey (before- and after design) <b>Survey 2:</b> Quantitative survey with qualitative elements carried out between seminars	Meets criteria <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Fontein-Kuipers, Budé, Ausems, Vries, & Nieuwenhuijze (2014), Netherlands	Exploring the behavioural intentions of antenatal management of maternal distress and examine the factors that influence those intentions	112 midwives based in the community	Exploratory online survey based on questionnaire	Meets criteria <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Nagel-Brotzler, Bronner, Hornstein, & Albani (2005), Germany	Investigating midwives' experience, knowledge and multiprofessional cooperation in the context of psychic disturbances in early motherhood	111 midwives	Telephone survey or personal questioning based on a questionnaire or participants completed a questionnaire	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample size not representative</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Psaila, Kruske, Fowler, Homer, & Schmied (2014), Australia	Exploring the transition of care between maternity services to child and family health services	<u>n=1,753</u> 655 midwives 1098 child and family health nurses	Quantitative online and mail survey with qualitative elements based on questionnaire	Meets criteria <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Ratti, Ross, Stephanson, & Williamson (2014), Canada	Identifying barriers and effective working relationship between physicians and midwives, find ways to improve the quality of professional interactions	<u>n=144</u> 25 midwives 73 family physicians 46 obstetricians	Mail survey based on questionnaire	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Method of data collection not validated</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>





Continued Table 3: Details and critique of the quantitative papers included in the thematic analysis

Authors, year, country	Research aim	Sample	Methods	Critique - Framework according to Caldwell, Henshaw, & Taylor (2011)
Skinner & Foureur (2010), New Zealand	Describing midwives' obstetric consultation and referral practices and their perceptions concerning the quality of their professional relationships with obstetricians	311 midwives	Mail survey based on questionnaire	Meets criteria <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Smith et al. (2009), Canada	Eliciting care providers' opinions regarding seven proposed models of maternity care, barriers to collaborative interprofessional practice and factors that would encourage the practice of intrapartum care	<u>n=1,167</u> 258 midwives 414 obstetricians 495 family physicians <i>own calculations, because in the study response rate is calculated in percent</i>	Mail survey based on questionnaire	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample size not adequately described</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>
Vedam et al. (2012), Canada	Describing educational, practical and personal experiences related to home birth, identify barriers to provision of planned home birth services	<u>n=835</u> 451 midwives 245 obstetricians 139 family physicians	Online survey based on questionnaire	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Aim of study clearly stated</li> <li>■ Study design clearly identified</li> <li>■ Population identified</li> <li>■ Sample size of family physicians not representative</li> <li>■ Data collection instruments appropriate to study aims</li> <li>■ Method of data analysis described and justified</li> <li>■ Results appropriate and clear</li> <li>■ Comprehensive discussion and conclusion</li> </ul>

Table 4: Details and critique of the mixed-methods papers included in the thematic analysis

Authors, year, country	Research aim	Sample	Methods	Critique - Strategic questions to trigger critical thinking (Aveyard, Sharp, & Wooliams, 2011)
Psaila, Schmied, Fowler, & Kruske (2015), Australia	Examine collaboration in the provision of universal health services for children and families in Australia	<u>Phase 1: n=105</u> 45 midwives 60 child and family health nurses <u>Phase 2: n=1,753</u> 655 midwives 1098 child and family health nurses	Phase 1: Discussion groups, focus groups, teleconferences Phase 2: Online survey	Meets criteria <ul style="list-style-type: none"> <li>■ Clear purpose and background</li> <li>■ Appropriate methods</li> <li>■ Methods of data analysis described and justified</li> <li>■ Conclusion reflects the findings</li> </ul>
Shaw (2013), United Kingdom	Exploring midwives', general practitioners' and maternity services planners' views of collaborative working in the community	<u>Questionnaire:</u> 10 community midwives, senior partners from 20 GP practices <i>exact number not stated</i> <u>Interviews (n=5):</u> 6 participants <i>profession not specified</i> <u>Professional forum:</u> midwives, GP's, midwifery advisor, representatives from Public Health Agency <i>number of each profession not specified</i>	Questionnaire, semi-structured interviews, professional forum	Meets criteria with restrictions <ul style="list-style-type: none"> <li>■ Clear purpose and background</li> <li>■ Appropriate methods</li> <li>■ Sample not adequately described</li> <li>■ Data collection and analysis strategy of professional forum not adequately described</li> <li>■ Findings cannot be generalised</li> <li>■ Conclusion reflects the findings</li> </ul>



of nurses' associations, form the largest group of study participants, followed by physicians, usually general practitioners and obstetricians, and representatives of their associations. Professional groups from social services and addressees of the care system were less frequently represented than professional groups from the public health sector.

## 4.2 Cooperation contexts

The results are based on diverse, frequently country-specific contexts, in which midwives cooperate with related professional groups. Six studies focus on the collaboration between midwives and nurses at the point where care progresses between midwifery services and child or family health care (Barimani & Hylander, 2008; Barimani & Hylander, 2012; Homer et al., 2009; Psaila, Fowler, Kruske, & Schmied, 2014; Psaila, Kruske, Fowler, Homer, & Schmied, 2014; Psaila et al., 2015). This shows a particular characteristic of the care systems in Sweden and Australia. In both countries, mothers and their neonates are looked after by midwives during pregnancy, birth, and postpartum period (Barimani & Hylander, 2008; Homer et al., 2009). Apart from this, the health care services of both countries monitor the children from birth on up to toddler age; in Australia, this is carried out by child and family health nurses, in Sweden by child health care nurses (Barimani & Hylander, 2008; Homer et al., 2009). In six other studies, the primary interest lies in interprofessional cooperation between midwives and physicians (Ratti et al., 2014; Schölmerich et al., 2014; Shaw, 2013; Skinner & Foureur, 2010; Smith et al., 2009; Vedam et al., 2012). Three studies examine the introduction of child or family health promotion programmes involving various groups of professions (Edvardsson et al., 2011; Edvardsson et al., 2012; Schmied et al., 2015), while four studies focus on the cooperation between professions in the health and social service sectors (Ayerle et al., 2014; Clancy, Gressnes, & Svensson, 2013; Miers & Pollard, 2009; While, Murgatroyd, Ullman, & Forbes, 2006). The collaboration between professional groups supporting women with complex physical and social needs is the subject of further studies (Fontein-Kuipers et al., 2014; Nagel-Brotzler et al., 2005), as is the cooperation between the various health professions involved in maternity care (Munro, Kornelsen, & Grzybowski, 2013; Murray-Davis et al., 2011; Peterson, Medves, Davies, & Graham, 2007; Pollard, 2011).

## 4.3 Benefits of cooperation

### 4.3.1 Benefits for midwives and other professional groups

Many studies underline the benefits gained by cross-professional cooperation in health and social services

(Ayerle et al., 2014; Barimani & Hylander, 2008; Barimani & Hylander, 2012; Clancy et al., 2013; Munro et al., 2013; Peterson et al., 2007; Psaila, Fowler et al., 2014). This is particularly the case in the care of women and families with special needs (Ayerle et al., 2014; Barimani & Hylander, 2008; Psaila, Kruske et al., 2014). Meetings between members of the various professions, where problems are jointly discussed (Psaila, Kruske et al., 2014), allow the psychosocial needs of families to be considered from all angles (Schmied et al., 2015). Furthermore, interdisciplinary case study conferences offer a chance to achieve competence in assessing families in problematic situations (Ayerle et al., 2014). Collaboration establishes contacts with women and families with limited access to professionals and services, which also enables a relationship to the families to be built up (Psaila, Fowler et al., 2014).

Barimani and Hylander (2012) mention a 'professional benefit', focussing on the personal benefit gained by working together. Such a benefit could be, for instance, understanding their own and other professionals' attitudes and values in terms of family support (Psaila, Fowler et al., 2014). A stronger cooperation is also associated with improving the work-life balance because the responsibility of providing adequate care is shared by the other professionals involved (Peterson et al., 2007).

Whether or not the cooperation between the professional groups is felt to be a benefit for the individual profession depends on its position in the care-providing system. Whereas Swedish midwives are the first and middle links in the chain of care as a result of their mandate to provide care during pregnancy and up to a week postpartum, child health care nurses caring for children up to 6 years of age are the final link in the chain of care. Child health care nurses emphasise that they rely on adequate information being supplied when they take over the care for families from the midwives. Midwives however report that they experience no direct benefit from working together with child health care nurses (Barimani & Hylander, 2008).

### 4.3.2 Benefits for the addressees of the care-provision system

Several studies emphasise the benefits that cooperation brings for those who make use of the care system (Barimani & Hylander, 2008; Barimani & Hylander, 2012; Homer et al., 2009; Nagel-Brotzler et al., 2005; Peterson et al., 2007; Psaila, Fowler et al., 2014). This is shown in the high quality of the care provided (Peterson et al., 2007; Ratti et al., 2014). The successful treatment of women with psychiatric disorders in early motherhood depends on interdisciplinary cooperation (Nagel-Brotzler et al., 2005). According to 25 representatives of Canadian midwives, physicians, and nursing associations, care provided by various professional groups working together



gives the women an improved access to maternity services as well as options regarding the providers. The study's participants hope that collaborative care provision will contribute to women with a low maternity risk, receiving adequate care that is intended to reduce the number of medical interventions (Peterson et al., 2007).

Midwives and child health care nurses who took part in a Swedish study do express the effective networking between antenatal and postnatal care and child health care services as being a benefit for the women (Barimani & Hylander, 2008), as in that both professional groups are seen as one unit (Barimani & Hylander, 2012). The parents benefit from a consensus between the groups, which also prevents an impression of being lost in the chain of care (Barimani & Hylander, 2008). Psaila et al. (2015) describe how effective collaboration at the intersection of maternity services and child and family health nursing becomes a positive experience for the families involved. Midwives and child and family health nurses express the opinion that this supports the building of positive relationships with the families, resulting in a longer-term connection to the providers (Psaila et al., 2015).

#### **4.4 Facilitating and restrictive factors of cooperation**

Three central themes were identified in the literature search that can not only support the cooperation between groups of professions, but can also impair it.

##### **4.4.1 Communication**

Communication influences the intensity of the cooperation (Psaila et al., 2015) and can facilitate the transition from one care provider to another (Homer et al., 2009). The communication between the professional groups is on either a formal or an informal level, both of which are considered important for the promotion of interprofessional cooperation (Munro et al., 2013; Murray-Davis et al., 2011; Psaila et al., 2015). This means that information can be exchanged during official meetings, for instance, or perhaps in the tearoom during a break (Barimani & Hylander, 2012). Numerous studies have described meetings between the various groups of professions to be conducive to cooperation (Barimani & Hylander, 2008; Edvardsson et al., 2011; Homer et al., 2009; Miers & Pollard, 2009; Schölmerich et al., 2014; Schmied et al., 2015), enabling the faces to be put to the voices that are already known (Barimani & Hylander, 2008) and ensuring that the participants understand each other (Miers & Pollard, 2009). Meetings can provide an insight into activities in other professions and also reveal synergies (Edvardsson et al., 2011) or counteract any lack of communication or any mistrust that might exist between the professional groups (Ratti et al., 2014). Only

a few studies take as their theme a negative or hostile attitude of the study population towards meetings with groups of other professionals (Barimani & Hylander, 2008).

In addition, communication between various professional groups can be supported by making combined offers of care provision (Ratti et al., 2014), by locating services from different professional groups at one particular location (Barimani & Hylander, 2008; Homer et al., 2009) and also by setting up an electronic information exchange system (Psaila, Fowler et al., 2014). An electronic system of referrals is an effective method of ensuring communication between the hospital-based and community maternity services (Psaila, Fowler et al., 2014). However, Homer et al. (2009) have reservations about this, stating that the non-verbal exchange of information could lead to restricted contact between those involved, resulting in insufficient knowledge about other professions.

A number of studies broach the issue of communication problems between the groups of professions and their effect on collaboration (Barimani & Hylander, 2008; Homer et al., 2009; Nagel-Brotzler et al., 2005; Psaila, Kruske et al., 2014; Schölmerich et al., 2014; Schmied et al., 2015; Shaw, 2013; Smith et al., 2009). Poor communication jeopardises the efficacy of working relationships (Murray-Davis et al., 2011; Psaila et al., 2015) and is identified as a 'key barrier' (Shaw, 2013), 'key problem' (Psaila, Kruske et al., 2014) or as 'an elephant in the room' (Schmied et al., 2015). Midwives experience this lack of communication more often as an impediment for collaboration in the context of maternity care than obstetricians or family physicians do (Smith et al., 2009). Three studies present an overview of the communication difficulties between midwives and physicians (Nagel-Brotzler et al., 2005; Schölmerich et al., 2014; Shaw, 2013), showing that pregnant women may take on an active, communicative-supportive role by transferring information between the professional groups (Schölmerich et al., 2014).

##### **4.4.2 Care perspectives**

Interprofessional working relationships are often greatly influenced by the perspectives on care provision taken by representatives of different professional groups: they can lead to a mutual goal or they can be a source of tension (Murray-Davis et al., 2011). Midwives and child health care nurses emphasise the relevance of perspectives when working together, particularly with regard to the transition between antenatal care, postnatal care, and child health care. A 'chain of care perspective', which is characterised by viewing the entire chain of care, includes the ability to collect knowledge about the other professions in the chain aside from one's own care service obligations.



Such a perspective may facilitate a joint action between the professional groups; ironically, joint action is simultaneously a prerequisite for such a perspective (Barimani & Hylander, 2012). In contrast, a 'link perspective', in which one's own abilities are prioritised and tasks are not seen as part of a comprehensive care provision system, has a restraining influence on the cooperation (Barimani & Hylander, 2008; Barimani & Hylander, 2012).

Some studies address topics of cooperation from different perspectives of the professional groups (Barimani & Hylander, 2008; Barimani & Hylander, 2012; Munro et al., 2013; Murray-Davis et al., 2011; Psaila, Kruske et al., 2014), others focus explicitly on the differing perspectives between midwives and physicians (Ratti et al., 2014; Schölmerich et al., 2014; Shaw, 2013; Smith et al., 2009; Vedam et al., 2012), which result in tension and conflict, mistrust, and a lack of respect (Ratti et al., 2014). Whereas 60.7% of the midwives who took part in a quantitative survey described different perspectives as being a central impediment for interprofessional cooperation with physicians, only 46.5% of the obstetricians and 23.3% of the family physicians asked were of the same opinion (Smith et al., 2009). Different perspectives between midwives and physicians are also revealed with regard to the safety of home births (Munro et al., 2013; Vedam et al., 2012). In consultations between both professions, this leads to a mutual feeling of 'discomfort', as seen in a quantitative survey by Vedam et al. (2012), in which a total of 825 midwives, obstetricians, and family physicians took part. While 71.2% (n = 99) of the family physicians and 82.6% (n = 194) of the obstetricians state that home births are not as safe as clinic births, only 1.1% (n = 5) of the midwives are of the same opinion. Both professions believe that their views are evidence-based.

#### 4.4.3 Relationships

Interprofessional relationships are vital for successful collaboration (Clancy et al., 2013; Homer et al., 2009; Munro et al., 2013; Psaila et al., 2015; Psaila, Fowler et al., 2014; Psaila, Kruske et al., 2014). They are the key to success for innovations at the interface between maternity services and child and family health services (Psaila, Fowler et al., 2014). In order to gain a deeper understanding of the working relationships between midwives and child and family health nurses, representatives of all groups were given a list of professions and asked to tick the three groups with whom they work together most frequently. As a rule, midwives work together regularly with associated health professions; child and family health nurses, and paediatricians are the next in line. Creating a professional relationship is challenging because it often takes a long time to develop; furthermore, it is difficult to maintain existing relationships, though organisational

support can strengthen them. In terms of the intensity of collaboration, midwives and child and family nurses give a higher rating to the relationship dimension than to the organisational factors (Psaila et al., 2015). This is confirmed by 1,418 members of health and social services who took part in a cross-sectional study, giving leadership and formalised structures a lower ranking than interprofessional relational factors (Clancy et al., 2013). Working relationships between midwives and physicians are the subject of other studies (Murray-Davis et al., 2011; Pollard, 2011; Skinner & Foureur, 2010). In a quantitative survey (Skinner & Foureur, 2010), midwives rated these as being excellent, but a qualitative study indicated that midwives experience their working relationships to physicians diversely (Pollard, 2011). On the one hand, they perceive their own profession on an equal footing with that of obstetricians in the health care system, describing their relationships as equitable; on the other hand, they endeavour to attain professional recognition in a hierarchical system. This can lead to friction, for instance, when midwives are obliged to observe certain paediatric guidelines that they deem inappropriate (Pollard, 2011).

#### 4.5 Competences for an effective cooperation

Interprofessional cooperation requires specific competences in the participants involved (Miers & Pollard, 2009; Munro et al., 2013; Murray-Davis et al., 2011). According to midwives, with regard to interprofessional cooperation, these competences concern communicative characteristics, role perception, trust, respect, and the ability to reflect. In connection with referrals and consultations, an understanding of the different professional roles becomes important and also enables the classification of the various professions within the health care system (Murray-Davis et al., 2011). However, there is no consensus among midwives about which skills are required for an effective cooperation. Murray-Davis et al. (2011) come to the conclusion that midwives perceive interprofessional relationships unilaterally through a 'uni-professional lens' and give no consideration to specific skills for cooperating between various groups of professions, such as resolving disputes.

Studies with samples from various professional groups give a much broader picture of the characteristics required for cooperation (Miers & Pollard, 2009; Munro et al., 2013). Apart from communicative skills, role perception, respect, and trust, interviewees from the health care and social services believe that other qualities are also important, such as the ability to work in a team, or personal characteristics like tolerance, perseverance, open-mindedness, commitment, sincerity, experience, and personal maturity. Punctuality, efficiency, and the



Table 5: The contribution of each paper to the thematic analysis

Authors and date	Cooperation contexts	Benefits of cooperation		Facilitating and restrictive factors of cooperation			Competences
		For midwives and other prof. groups	For addressees of care-provision system	Communication	Care perspectives	Relationships	
Ayerle, Mattern, & Fleischer (2014)							
Barimani & Hylander (2008)							
Barimani & Hylander (2012)							
Clancy, Gressnes, & Svensson (2013)							
Edvardsson et al. (2011)							
Edvardsson et al. (2012)							
Fontein-Kuipers, Budé, Ausems, Vries, & Nieuwenhuijze (2014)							
Homer et al. (2009)							
Miers & Pollard (2009)							
Munro, Kornelsen, & Grzybowski (2013)							
Murray-Davis, Marshall, & Gordon (2011)							
Nagel-Brotzler, Bronner, Hornstein, & Albani (2005)							
Peterson, Medves, Davies, & Graham (2007)							
Pollard (2011)							
Psaila, Fowler, Kruske, & Schmied (2014)							
Psaila, Kruske, Fowler, Homer, & Schmied (2014)							
Psaila, Schmied, Fowler, & Kruske (2015)							
Ratti, Ross, Stephanson, & Williamson (2014)							
Schmied et al. (2015)							
Schölmerich et al. (2014)							
Shaw (2013)							
Skinner & Foureur (2010)							
Smith et al. (2009)							
Vedam et al. (2012)							
While, Murgatroyd, Ullman, & Forbes (2006)							

Key:

	Qualitative papers
	Quantitative papers
	Mixed Methods papers





ability to work across professional boundaries are other qualities mentioned by participants (Miers & Pollard, 2009). In a Canadian study, qualities such as mutual decision making and a flexible approach to handling care were underlined as being important (Munro et al., 2013).

## 5 LIMITATIONS

Most of the studies take issues of cooperation between professional groups into consideration. Although enlightening views regarding the midwives' perspective have, thus, been gained, the relevance of the findings is not limited to that profession, so that a specific discussion could not be included in many studies. If a bias concerning the selection of the studies were to be wholly avoided, the selection would have had to be made by two researchers appraising the literature independently of one another. To counteract the methodical limitations, the co-authors were regularly involved in the process, as were scientists from a research workshop.

Due to the time span of the study being limited to the last 10 years, insights gained in studies before this period might possibly be missing. This, as well as the restriction of the search to studies written in English or German, could have led to a distortion of the results.

The strong points of this study lie in the methodology of the integrative review. The perspective is widened by including studies in which midwives are a subgroup of the sample, thus providing a basis for comparing the study results.

## 6 Discussion

The results indicate the versatility with which midwives cooperate with other professional groups in out-of-hospital obstetrical care. However, they also point to the restricted research image of the perspective of midwives on interprofessional cooperation. Few studies focus exclusively on the perspective of midwives, although it is known that there are quite different specific factors for professional groups and that these have an influence on interprofessional cooperation (Munro et al., 2013). Most of the studies compare the midwives' perspective with those of other professional groups or subsume it in an interdisciplinary approach. This can lead to a relativisation of the perspective of midwives and to a promotion of mistaken role expectations. In contrast, successful cooperation requires a clear understanding of the roles involved (Cameron & Lart, 2003). Further research is necessary in the future to present the midwives' perspective correctly.

Among the studies reviewed, only a few took representatives from the social system into consideration; most of them focussed on the cooperation of midwives

with other health care professionals. On the one hand, the current results indicate a field of research, which has been only rarely focussed on; on the other hand, they reveal that cooperation between midwives and social services has international relevance in health care (Clancy et al., 2013; Miers & Pollard, 2009; While et al., 2006). The studies show a consensus achieved on the benefits of interprofessional cooperation for those using the care system. This can be seen in the improved access to maternity services, more options regarding providers, and the maintenance of positive relationships between families and service providers. However, these findings also emphasise the necessity of empirical research on the perspective of the users with regards to the benefit gained by cooperating. This is lacking attention so far (Dowling et al., 2004; Walkenhorst et al., 2015).

From the study situation, midwives and members from other professional groups can identify the benefits of cooperation, which come to the fore, particularly in the care of women and families with special needs. The success of interprofessional cooperation depends on various factors. Communication, individual care perspectives, and relationships all play a major role. According to the study findings, identifying services from different professional groups in one particular location, overcoming a perspective in which solely one's own interests are prioritised as well as maintaining the existing relationships all contribute to the success of cooperation. This leads to the discovery made by Cameron and Lart (2003), according to which, the future challenge for health and social services lies in the support of factors promoting cooperation and in restricting those hindering it. The question of competencies for interprofessional cooperation shows that there is no consensus within the midwifery profession as to which specific skills are required for an effective cooperation (Murray-Davis et al., 2011). For the future, it would seem constructive to develop descriptions of the skills needed by midwives for cooperating with other professional groups. These would contribute to the development of a professional identity, which is becoming increasingly more important in the context of interprofessional education and collaborative practice (Walkenhorst, 2016).

The necessity of excellent interprofessional collaboration for ensuring and developing health care is undisputed (SVR, 2007; Walkenhorst et al., 2015). A constructive debate on the issue of interprofessionalism is also perceived as a prerequisite for the success of the academisation of health professions currently taking place in Germany (Walkenhorst, 2016). The cooperation of various players in health care and social services has been legally anchored with the German Law for Cooperation and Information in Child Protection (KKG) in the first article of the Federal Child Protection Act



(BKISchG), which came into force in 2012. In this way, the cooperation with professional groups in social services receives new significance for midwives. Early prevention cooperations are a relatively unexplored subject within Germany (Lohmann, 2015). Although the relevance of effective collaboration between the health and social systems is being discussed internationally, it remains to be seen how this can be transferred to German circumstances, since the structural conditions are different in each country. The lack of attention paid in research to the subject of interprofessional cooperation of midwives with professional groups in the social system underscores the necessity for future research.

## References

- Aveyard, H., Sharp, P., & Wooliams, M. (2011). *A beginner's guide to critical thinking and writing in health and social care*. Maidenhead: Open University Press.
- Aveyard, H. (2014). *Doing a literature review in health and social care: A practical guide* (3rd ed.). Maidenhead, Berkshire: Open University Press.
- Ayerle, G. M., Mattern, E., & Fleischer, S. (2014). Welche Kenntnisse und Einstellungen haben freiberuflich tätige Hebammen in Sachsen-Anhalt zum Netzwerk "Frühe Hilfen"? *Zeitschrift für Hebammenwissenschaft*, 02(02), 53-61.
- Barimani, M., & Hylander, I. (2008). Linkage in the chain of care: A grounded theory of professional cooperation between antenatal care, postpartum care and child health care. *International Journal of Integrated Care*, 8(4), 1-13.
- Barimani, M., & Hylander, I. (2012). Joint action between child health care nurses and midwives leads to continuity of care for expectant and new mothers. *International Journal of Qualitative Studies on Health and Well-Being*, 7(18183), 1-11.
- BKISchG (2011). Bundeskinderschutzgesetz. Gesetz zur Stärkung eines aktiven Schutzes von Kindern und Jugendlichen. Vom 22. Dezember 2011. Retrieved from [https://www.lwl.org/spur-download/bag/03\\_12an.pdf](https://www.lwl.org/spur-download/bag/03_12an.pdf).
- Caldwell, K., Henshaw, L., & Taylor, G. (2011). Developing a framework for critiquing health research: an early evaluation. *Nurse Education Today*, 31(8), e1-7.
- Cameron, A., & Lart, R. (2003). Factors promoting and obstacles hindering joint working: A systematic review of the research evidence. *Journal of Integrated Care*, 11(2), 9-17.
- Clancy, A., Gressnes, T., & Svensson, T. (2013). Public health nursing and interprofessional collaboration in Norwegian municipalities: A questionnaire study. *Scandinavian Journal of Caring Sciences*, 27(3), 659-668.
- Critical Appraisal Skills Programme (CASP). (2013). *Qualitative Research Checklist*. Retrieved from [http://media.wix.com/ugd/dded87\\_29c5b002d99342f788c6ac670e49f274.pdf](http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf).
- Dowling, B., Powell, M., & Glendinning, C. (2004). Conceptualising successful partnerships. *Health and Social Care in the Community*, 12(4), 309-317.
- Edvardsson, K., Garvare, R., Ivarsson, A., Eurenus, E., Mogren, I., & Nyström, M. E. (2011). Sustainable practice change: Professionals' experiences with a multisectoral child health promotion programme in Sweden. *BMC Health Services Research*, 11(61), 1-12.
- Edvardsson, K., Ivarsson, A., Garvare, R., Eurenus, E., Lindkvist, M., Mogren, I., Nyström, M. E. (2012). Improving child health promotion practices in multiple sectors - outcomes of the Swedish Salut Programme. *BMC Public Health*, 12 (920), 1-13.
- Fontein-Kuipers, Y.J., Budé, L., Ausems, M., Vries, R. de, & Nieuwenhuijze, M. J. (2014). Dutch midwives' behavioural intentions of antenatal management of maternal distress and factors influencing these intentions: An exploratory survey. *Midwifery*, 30(2), 234-241.
- Heatley, M., & Kruske, S. (2011). Defining collaboration in Australian maternity care. *Women and Birth: Journal of the Australian College of Midwives*, 24(2), 53-57.
- Homer, C. S., Henry, K., Schmied, V., Kemp, L., Leap, N., & Briggs, C. (2009). 'It looks good on paper': Transitions of care between midwives and child and family health nurses in New South Wales. *Women and Birth: Journal of the Australian College of Midwives*, 22(2), 64-72.
- Hurlburt, M. S., Leslie, L. K., Landsverk, J., Barth, R. P., Burns, B., Gibbons, R. D., Zhang, J. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry*, 61(12), 1217-1224.
- Kaba-Schönstein, L. (2004). Einleitung. In L. Kaba-Schönstein & K. Kälble (Eds.), *Interdisziplinäre Kooperation im Gesundheitswesen. Eine Herausforderung für die Ausbildung in der Medizin, der Sozialen Arbeit und der Pflege. Ergebnisse des Forschungsprojektes MESOP* (pp. 11-28). Frankfurt am Main: Mabuse-Verlag.
- Kälble, K. (2004). Berufsgruppen- und fachübergreifende Zusammenarbeit - Terminologische Klärungen. In L. Kaba-Schönstein & K. Kälble (Eds.), *Interdisziplinäre Kooperation im Gesundheitswesen. Eine Herausforderung für die Ausbildung in der Medizin, der Sozialen Arbeit und der Pflege. Ergebnisse des Forschungsprojektes MESOP* (pp. 29-41). Frankfurt am Main: Mabuse-Verlag.
- KKG (2011). Gesetz zur Kooperation und Information im Kinderschutz vom 22.12.2011, BGBl S. 2975. Das Gesetz wurde als Artikel 1



- des Bundeskinderschutzgesetzes (BKSchG) v. 22.12.2011 I 2975 vom Bundestag mit Zustimmung des Bundesrates beschlossen. Es ist gem. Art. 6 dieses Gesetzes am 1.1.2012 in Kraft getreten. Retrieved from <http://www.gesetze-im-internet.de/bundesrecht/kkg/gesamt.pdf>.
- Kuhlmei, A. (2011). Die Idee des Memorandums "Kooperation der Gesundheitsberufe" - Einleitung. In Robert Bosch Stiftung (Ed.), *Memorandum Kooperation der Gesundheitsberufe. Qualität und Sicherstellung der zukünftigen Gesundheitsversorgung* (pp. 9-13). Stuttgart: Robert Bosch Stiftung GmbH.
- Lohmann, A. (2015). *Kooperationen in Frühen Hilfen: Ansätze zur zielorientierten Gestaltung*. Weinheim: Beltz Juventa.
- Miers, M., & Pollard, K. (2009). The role of nurses in interprofessional health and social care teams. *Nursing Management*, 15(9), 30-35.
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), e1000097.
- Munro, S., Kornelsen, J., & Grzybowski, S. (2013). Models of maternity care in rural environments: Barriers and attributes of interprofessional collaboration with midwives. *Midwifery*, 29(6), 646-652.
- Murray-Davis, B., Marshall, M., & Gordon, F. (2011). What do midwives think about interprofessional working and learning? *Midwifery*, 27(3), 376-381.
- Nagel-Brotzler, A., Brönnner, J., Hornstein, C., & Albani, C. (2005). Peripartale psychische Störungen - Früherkennung und multiprofessionelle Kooperation. *Zeitschrift für Geburtshilfe und Neonatologie*, 209(2), 51-58.
- Nationales Zentrum Frühe Hilfen (NZFH). (2014a). Bundesinitiative Frühe Hilfen. Zwischenbericht 2014: Herausgegeben vom Nationalen Zentrum Frühe Hilfen als Koordinierungsstelle des Bundes. Retrieved from <http://www.bmfsfj.de/RedaktionBMFSFJ/Abteilung5/Pdf-Anlagen/fruehe-hilfen-zwischenbericht.property=pdf,bereich=bmfsfj,sprache=de,rwb=true.pdf>.
- Nationales Zentrum Frühe Hilfen (NZFH). (2014b). Leitbild Frühe Hilfen: Beitrag des NZFH-Beirats. Retrieved from [http://www.fruehehilfen.de/fileadmin/user\\_upload/fruehehilfen.de/pdf/NZFH\\_Kompakt\\_Beirat-Leitbild\\_fuer\\_Fruehe\\_Hilfen\\_BZgA\\_low\\_14-02332.pdf](http://www.fruehehilfen.de/fileadmin/user_upload/fruehehilfen.de/pdf/NZFH_Kompakt_Beirat-Leitbild_fuer_Fruehe_Hilfen_BZgA_low_14-02332.pdf).
- Peterson, W. E., Medves, J. M., Davies, B. L., & Graham, I. D. (2007). Multidisciplinary collaborative maternity care in Canada: Easier said than done. *Journal of Obstetrics and Gynaecology Canada: JOGC*, 29(11), 880-886.
- Pollard, K. C. (2011). How midwives' discursive practices contribute to the maintenance of the status quo in English maternity care. *Midwifery*, 27(5), 612-619.
- Psaila, K., Fowler, C., Kruske, S., & Schmied, V. (2014). A qualitative study of innovations implemented to improve transition of care from maternity to child and family health (CFH) services in Australia. *Women and Birth: Journal of the Australian College of Midwives*, 27(4), e51-60.
- Psaila, K., Kruske, S., Fowler, C., Homer, C., & Schmied, V. (2014). Smoothing out the transition of care between maternity and child and family health services: Perspectives of child and family health nurses and midwives'. *BMC Pregnancy and Childbirth*, 14(151), 1-13.
- Psaila, K., Schmied, V., Fowler, C., & Kruske, S. (2015). Interprofessional collaboration at transition of care: Perspectives of child and family health nurses and midwives. *Journal of Clinical Nursing*, 24(1-2), 160-172.
- Ratti, J., Ross, S., Stephanson, K., & Williamson, T. (2014). Playing nice: Improving the professional climate between physicians and midwives in the Calgary area. *Journal of Obstetrics and Gynaecology Canada: JOGC*, 36(7), 590-597.
- Sachverständigenrat zur Begutachtung der Entwicklung im Gesundheitswesen (SVR). (2007). *Kooperation und Verantwortung: Voraussetzungen einer zielorientierten Gesundheitsversorgung. Gutachten 2007. Kurzfassung*. Retrieved from [http://www.svr-gesundheit.de/fileadmin/user\\_upload/Gutachten/2007/Kurzfassung\\_2007.pdf](http://www.svr-gesundheit.de/fileadmin/user_upload/Gutachten/2007/Kurzfassung_2007.pdf).
- Sayn-Wittgenstein, F. zu (Ed.). (2007). *Geburtshilfe neu denken. Bericht zur Situation und Zukunft des Hebammenwesens in Deutschland*. Bern: Hans Huber.
- Schmied, V., Mills, A., Kruske, S., Kemp, L., Fowler, C., & Homer, C. (2010). The nature and impact of collaboration and integrated service delivery for pregnant women, children and families. *Journal of Clinical Nursing*, 19(23-24), 3516-3526.
- Schmied, V., Homer, C., Fowler, C., Psaila, K., Barclay, L., Wilson, I., Kruske, S. (2015). Implementing a national approach to universal child and family health services in Australia: Professionals' views of the challenges and opportunities. *Health and Social Care in the Community*, 23(2), 159-170.
- Schölmerich, V. L., Posthumus, A. G., Ghorashi, H., Waelput, A. J., Groenewegen, P., & Denktas, S. (2014). Improving interprofessional coordination in Dutch midwifery and obstetrics: A qualitative study. *BMC Pregnancy and Childbirth*, 14(145), 1-8.
- SGB V (2016). Sozialgesetzbuch Fünftes Buch. Gesetzliche Krankenversicherung. Artikel 1 des Gesetzes v. 20. Dezember 1988, BGBl. I S. 2477. Zuletzt geändert durch Art. 2 Abs. 12 G v. 17.02.16. Retrieved from [http://www.gesetze-im-internet.de/bundesrecht/sgb\\_5/gesamt.pdf](http://www.gesetze-im-internet.de/bundesrecht/sgb_5/gesamt.pdf).
- Shaw, B. (2013). Collaborative working within community maternity services - is this the chink in the armour? *British Journal of Midwifery*, 21(4), 285-291.
- Skinner, J. P., & Foureur, M. (2010). Consultation, referral, and collaboration between midwives and obstetricians: Lessons from New Zealand. *Journal of Midwifery & Women's Health*, 55(1), 28-37.
- Smith, C., Brown, J. B., Stewart, M., Trim, K., Freeman, T., Beckhoff, C., & Kasperski, J. (2009). Ontario care providers' considerations regarding models of maternity care. *Journal of Obstetrics and Gynaecology Canada: JOGC*, 31(5), 401-408.
- Supper, I., Catala, O., Lustman, M., Chemla, C., Bourgueil, Y., & Letrillart, L. (2015). Interprofessional collaboration in primary health care: A review of facilitators and barriers perceived by involved actors. *Journal of Public Health (Oxford, England)*, 37(4), 716-727.
- Vedam, S., Schummers, L., Stoll, K., Rogers, J., Klein, M. C., Fairbrother, N., Kaczorowski, J. (2012). The Canadian Birth Place Study: Describing maternity practice and providers' exposure to home birth. *Midwifery*, 28(5), 600-608.



- VV BIFH (2012). Verwaltungsvereinbarung Bundesinitiative Netzwerke Frühe Hilfen und Familienhebammen 2012-2015 gem. § 3 Absatz 4 des Gesetzes zur Kooperation und Information im Kinderschutz. Retrieved from [http://www.fruehehilfen.de/fileadmin/user\\_upload/fruehehilfen.de/pdf/Verwaltungsvereinbarung\\_zur\\_Bundesinitiative\\_16\\_01\\_22.pdf](http://www.fruehehilfen.de/fileadmin/user_upload/fruehehilfen.de/pdf/Verwaltungsvereinbarung_zur_Bundesinitiative_16_01_22.pdf).
- Walkenhorst, U. (2016). Die Relevanz Interprofessioneller Lern- und Arbeitsprozesse im Kontext der Akademisierung der Gesundheitsberufe. *International Journal of Health Professions*, 3(1), 21-28.
- Walkenhorst, U., Mahler, C., Aistleithner, R., Hahn, E. G., Kaap-Fröhlich, S., Karstens, S., Sottas, B. (2015). Position statement GMA Committee – “Interprofessional Education for the Health Care Professions”. *GMS Zeitschrift für medizinische Ausbildung*, 32(2), Doc22.
- While, A., Murgatroyd, R., Ullman, R., & Forbes, A. (2006). Nurses’, midwives’ and health visitors’ involvement in cross-boundary working within child health services. *Child: Care, Health & Development*, 32(1), 87-99.
- Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, 52(5), 546-553.
- Williams, J., & Davis, S. (2014). Midwifery: Chapter 7. In J. Thomas, K. C. Pollard, & D. Sellman (Eds.), *Interprofessional working in Health and Social Care. Professional Perspectives* (2nd ed., pp. 89-99). Basingstoke: Palgrave Macmillan.